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## **Energy Efficiency Results for Iowa Utility Programs**



Energy Efficiency Study  
Committee

October 18, 2007

## **Utility Energy Efficiency Focus Areas for Programs**

1. Electric energy efficiency (EE) savings (MWh or megawatt-hours)
2. Electric peak demand savings (peak MW or megawatts)
3. Natural gas energy efficiency savings (Mcf or thousand cubic feet)



## **Overriding Goal is Cost-effectiveness**

- Benefits must exceed costs of energy efficiency
- Benefit-cost ratio of 1.0 or greater assures utilities, IUB, OCA and others that energy efficiency dollars are spent wisely
- IUB also requires utilities to calculate "Net Benefits" comparing ongoing future benefits to current and future costs



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### **1. Electric Energy Efficiency Savings**

- New IOU electric EE MWh savings in 2006
  - 270,000 MWh saved by EE
  - 0.8% of total IOU retail MWh
- Total IOU EE savings for 2006 includes cumulative (ongoing) savings from previous programs
  - 1.9 million MWh in 2006
  - Amounts to about 6% of total 2006 retail MWh
- Key fact: IOU new EE MWh savings more than doubled from 2002 - 2006



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## **2. Electric Peak Demand Savings**

- IOU programs saved about 1,000 peak MW in 2006
- Equal to about 9 “peaker” power plants of 110 MW, about the size of the MidAmerican River Hills plant in downtown Des Moines



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## **3. Natural Gas Energy Efficiency Savings**

- IOU new gas energy efficiency measures saved about 860,000 Mcf in 2006
- IOU natural gas savings from ongoing plus new measures (cumulative) saved almost 8 million Mcf per year in 2006
- This is enough gas to heat about 100,000 average Iowa homes



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## Utility Results Compared to Goals

- NEW Electric EE MWh savings in 2006 equaled 195% of 2006 savings goal
- NEW Electric EE Spending in 2006 equaled about 110% of 2006 budget goal
- NEW Natural Gas EE Mcf savings in 2006 equaled about 129% of 2006 savings goal
- NEW Natural Gas EE Spending in 2006 equaled about 135% of 2006 budget goal



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## IOU Total Benefits and Costs

Societal benefits and costs are based on the Societal Test, which reflects the benefits to both the utility and its customers.

IOU Program Types	Societal Benefits (\$ Million)	Societal Costs (\$ Million)	Societal Net Ben. (\$ Million)	Soc. B/C Ratio
Electric LM	486	240	245	2.02
Electric EE	216	96	120	2.24
Gas EE	82	50	32	1.63
All LM + EE	784	387	397	2.03



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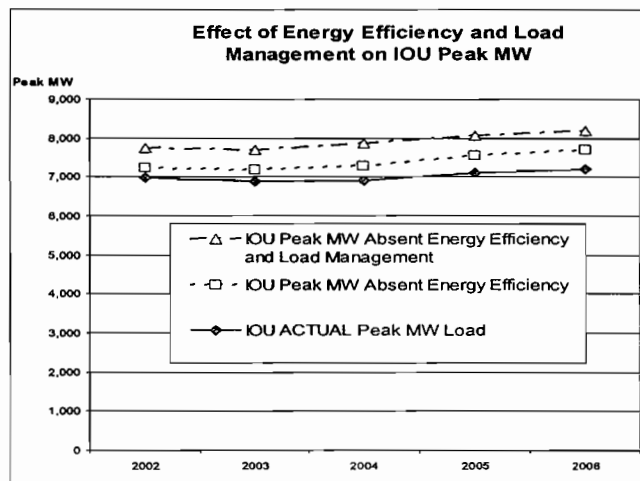
## IOU Energy Efficiency Spending for Calendar Year 2006

Spending for 2006 in \$	Alliant/ IPL	MidAmerica n Energy	Aquila, Inc.	Atmos Energy	Totals
Electric EE	19,100,000	18,000,000	NA	NA	37,100,000
Electric LM	24,600,000	10,700,000	NA	NA	35,300,000
Gas EE	8,300,000	17,200,000	4,000,000	40,000	29,500,000
Other	2,000,000	2,300,000	300,000	NA	3,600,000
Totals	54,000,000	48,200,000	4,300,000	40,000	106,500,000



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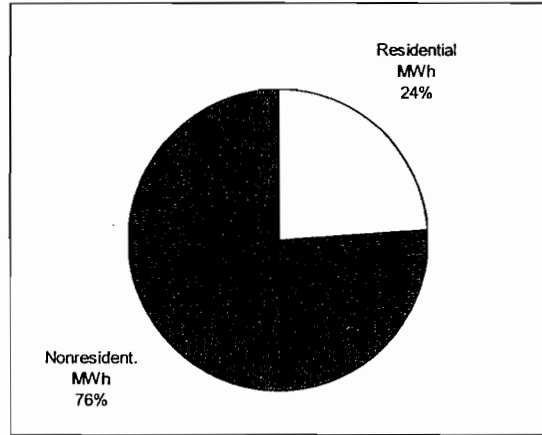
## IOU Peak MW EE Savings Effects



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## IOU New Electric EE Savings by Customer Type

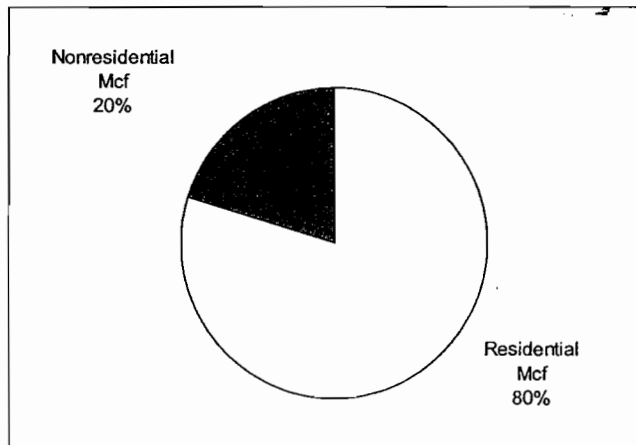
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## IOU New EE Savings in 2006 by Customer Type

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## Energy Efficiency and Load Management by RECs and Munis

- Plan information and results are filed biennially with the IUB
- Programs by RECs and Munis are voluntary
- Approval of programs is local, incentives are part of each utility's operating budget
- RECs spent about \$11.7 million in 2006
- Munis spent about \$3.8 million in 2006



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## REC and Muni Cumulative (Ongoing and New) Results

REC Results in 2006	Muni Results in 2006
Electric EE MWh = 177,000 per year	Electric EE MWh = 171,000 per year
Electric peak MW = 368 per year	Electric peak MW = 407 per year
Gas EE = 86 Mcf for one REC with gas service	Gas Mcf = 14,000 Mcf (NEW ONLY) for 51 Municipal gas utilities



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## **Summary – Utility EE and LM Results through 2006**

- For every \$1 spent, utility EE programs save \$2
- EE and LM programs have avoided peak MW equal to several “peaker” plants
- Electric EE is saving fuel (coal) needed to generate 8 million MWh
- Gas EE is saving enough natural gas to heat 100,000 average Iowa homes



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## **Sources and Contacts**

- Data used in these slides were provided to the Iowa Utilities Board in annual reports of investor-owned utilities Alliant Energy/IPL, Aquila Inc., Atmos Energy and MidAmerican Energy, and by the Iowa Association of Electric Cooperatives and the Iowa Association of Municipal Utilities.
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